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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,735	09/30/2003	Mary Frances Doerner	HSJ920030182US1	7962
	7590		EXAMINER	
	06/29/2004		RICKMAN, HOLLY C	
Marlin Knight Hoyt & Knight PO Box 1320 Pioneer, CA 95666			ART UNIT	PAPER NUMBER
			1773	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,735

Applicant(s)

DOERNER ET AL.

Examiner

Holly Rickman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 6, 9, 13, 15, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-4, 7, 8, 10-12, 14, 16, 17 and 20 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/16/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 recites the limitation "the substrate" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-6, 9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isono et al. (US 2003/0203244).

Isono et al. teach a magnetic recording medium having a circumferentially textured glass substrate, a compressive stress glass layer (corresponds to pre-seed layer), a first and second seed layer formed from a B2 material such RuAl or NiAlB, a CrTi underlayer and a magnetic layer thereon (see paragraphs 13-17, 74-75, and 89). The

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reference fails to disclose a structure having a layer of RuAl and a layer of NiAlB thereon.

The reference teaches that RuAl is a preferred seedlayer material. It would have been obvious to choose NiAlB from the group of suitable B2 seedlayer materials for use as the second seedlayer deposited on the first seedlayer. It would have been obvious to choose this particular alloy from the group of disclosed alloys because each of the materials is functionally equivalent. Substitution of equivalents requires no express motivation as long as the prior art recognizes the equivalency. *In re Fount*, 213 USPQ 532 (CCPA 1982); *In re Siebentritt*, 152 USPQ 618 (CCPA 1967).

5. Claims 15 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isono et al. (US 2003/0203244) in view of Abarra et al. (US 6753101).

Isono et al. teach all of the limitations of the claims as detailed above, except for the recording elements for use therewith.

Abarra et al. teach a conventional disk drive structure which includes a magnetic head, an actuator arm for moving the head with respect to the medium and a magnetic recording medium.

It would have been obvious to one of ordinary skill in the art at the time of invention to use the actuator arm and recording head taught by Abarra et al. in combination with the magnetic recording medium taught by Isono et al. in order to form a functional disk drive apparatus.

Allowable Subject Matter

6. Claims 2-4, 7-8, 10-12, 14, 16-17 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Isono et al. fails to teach the claimed amount of B in the NiAlB layer, the claimed composition of the NIALB layer, the presence of a CrTi layer underneath the RuAl layer, and a magnetic recording layer structure having a first magnetic layer formed from CoCr and a second magnetic layer formed from CoPtCrB separated from the first layer by a spacer. The prior art fails to teach or suggest a motivation to modify the teachings of Isono et al. to arrive at the claimed invention.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ueno (US 6159625) and Lee (US 6740397) are cited as art of interest.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J. Thibodeau can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Holly Rickman", with a stylized flourish at the end.

Holly Rickman
Primary Examiner
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June 24, 2004